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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHINGLES, KRISTIE D

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,223

Applicant(s)

OFELT ET AL.

Examiner

Kristie Shingles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) 44-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 and 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 44-49 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant has amended claims 1, 12, 16, 18, 29, 32, 34, 49 and 50.

Claims 1-53 are still pending.

(Restriction-elected claims: 1-43 and 50-53. Non-elected claims 44-49.)

Drawings

1. The proposed drawing corrections filed 1/24/2005 have been accepted by the Examiner. The corrections to the drawings will not be held in abeyance.

Response to Arguments

2. Applicant's arguments (see Remarks pages 10-18) filed on 1/24/2005 with respect to 1-52 have been fully considered and are persuasive. Therefore, the previous rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of *Blair* (USPN 6,778,495).

Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. *Claims 1-43 and 50-53* are drawn to receiving and forwarding sequenced data, classified in class 709 subclass 231.

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II. *Claims 44-49* are drawn to the selection of a sequencing scheme to sequence the received data, classified in class 370 subclass 394.

4. Inventions from Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention of Group I has separate utility such as "selecting sequence numbers from each queue in sequence to sequence the data blocks" which is not evident in the invention of Group II. See MPEP § 806.05(d).

Applicant is required under 35 U.S.C. 121 to elect a single invention.

Restriction Election

5. The Office acknowledges the receipt of Applicant's restriction election, discussed over the telephone with Atty. Kent J. Sieffert on 5/9/2005 @ 10:25am. Applicant elects with traverse Group I, hence, claims 1-43 and 50-53 are pending and examined in the instant application. Group II, claims 44-49, are non-elected and therefore will not be examined. This restriction is made FINAL.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims **1-43 and 50-53** are rejected under 35 U.S.C. 102(e) as being anticipated by *Blair* (USPN 6,778,495).

a. **Per claims 1, 7 and 12**, *Blair* teaches a method comprising:

- receiving a set of fragments from a plurality of links in one or more interface cards according to a multi-link protocol, the set of fragments collectively composing an unsequenced data packet (col.3 lines 6-61, col.4 lines 1-45 and col.5 line 1-col.7 line 8);
- sending the fragments to a multi-link service card for sequencing (col.4 line 23-col.5 line 9; data fragments are sent to the decoder coupled to the multi-link interfaces); and
- sending the sequenced fragments as a sequenced data packet to the one or more interface cards for communication to a destination device over a computer network (col.5 line 1-col.6 line 67; the sequenced data fragment are sent to the router over the network—router fragments packets and queues the packets for transmission over the links).

b. **Claims 19, 29, 32, 34 and 50** contain limitations that are substantially similar to claims 1, 7 and 12 and are therefore rejected under the same basis.

c. **Per claim 2**, *Blair* teaches the method of claim 1, wherein the multi-link service card is not directly coupled to any of the links (Figures 3, 4, col.4 line 56-col.5 line 9, col.8 lines 16-63 and col.10 lines 18-65).

d. **Claims 8 and 16** are substantially similar to claim 2 and are therefore rejected under the same basis.

e. **Per claim 3**, *Blair* teaches the method of claim 1, wherein the multi-link service card is integrated with one of the interface cards (Figures 3, 4, col.4 line 56-col.5 line 9, col.8 lines 16-63 and col.10 lines 18-6).

f. **Claim 9** is substantially similar to claim 3 and is therefore rejected under the same basis.

g. **Per claim 4**, *Blair* teaches the method of claim 1, further comprising: sending the data packets from one or more interface cards to the destination device over multiple links according to the multi-link protocol (Figures 1, 3 and col.4 line 1-col.6 line 63).

h. **Claims 10 and 17** are substantially similar to claim 4 and are therefore rejected under the same basis.

i. **Per claim 5**, *Blair* teaches the method of claim 4, further comprising, prior to sending the sequenced data packets to the one or more interface cards: sending the data packets to the multi-link service card for fragmentation (col.4 lines 1-39, col.5 lines 1-9 and col.6 lines 5-67).

j. **Claim 11** is substantially similar to claim 5 and is therefore rejected under the same basis.

k. **Per claim 6**, *Blair* teaches the method of claim 1, further comprising: prioritizing the sequenced data packets to provide quality of service prior to sending the sequenced data packets to the interface cards (col.4 line 1-col.5 line 52 and col.9 line 15-col.10 line 18).

l. **Claims 18 and 42** are substantially similar to claim 6 and are therefore rejected under the same basis.

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m. **Per claim 13**, *Blair* teaches the method of claim 12, wherein the data blocks are fragments, the method further comprising building a packet from the fragments in the first multi-link service card (col.5 lines 1-9 and col.10 lines 24-65).

n. **Claim 41** is substantially similar to claim 13 and is therefore rejected under the same basis.

o. **Per claim 14**, *Blair* teaches the method of claim 13, further comprising fragmenting the packet in the first multi-link service card (col.6 line 5-36, col.7 line 9-col.8 line 63 and col.10 lines 24-65).

p. **Per claim 15**, *Blair* teaches the method of claim 14, further comprising sending the fragmented packet to a destination device over a computer network (Figures 1-4 and col.5 line 1-col.6 line 67).

q. **Claims 20 - 22** are substantially similar to claim 15 and are therefore rejected under the same basis.

r. **Per claim 23**, *Blair* teaches the router of claim 22, wherein the routing engine includes a routing table (Figure 3, col.6 lines 23-64 and col.9 lines 8-63).

s. **Claim 51** is substantially similar to claim 23 and is therefore rejected the same basis.

t. **Per claim 24**, *Blair* teaches the router of claim 19, wherein the data blocks are data packets (col.4 lines 1-39 and col.6 lines 12-36).

u. **Claims 25, 30, 31 and 33** are substantially similar to claim 24 and are therefore rejected under the same basis.

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v. **Per claim 26**, *Blair* teaches the router of claim 19, further comprising a plurality of interface cards (col.5 line 64-col.6 line 11).

w. **Per claim 27**, *Blair* teaches the router of claim 19, further comprising a plurality of multi-link service cards (Figures 3, 4 and col.10 lines 24-65).

x. **Per claim 28**, *Blair* teaches the router of claim 19, wherein the routing control unit forwards sequenced data blocks to the multi-link service card for fragmentation (col.8 lines 16-63 and col.10 lines 24-65).

y. **Per claim 35**, *Blair* teaches the multi-link service card of claim 34, further comprising: a memory logic unit coupled to the input logic unit and the output logic unit for storing at least part of the data blocks during sequencing (col.6 lines 47-64 and col.11 lines 29-49).

z. **Per claim 36**, *Blair* teaches the multi-link service card of claim 34, wherein the output unit fragments sequenced data blocks (col.4 line 56-col.6 line 67 and col.10 lines 19-65).

aa. **Per claim 37**, *Blair* teaches the multi-link service card of claim 34, wherein the input logic unit includes an input buffer, an unprocessed buffer and a parser (col.4 lines 1-65, col.6 lines 23-64, col.9 line 30-65, col.11 lines 29-49, col.12 lines 35-50 and col.13 lines 21-25).

bb. **Per claim 38**, *Blair* teaches the multi-link service card of claim 34, wherein the output logic unit includes an output buffer, a processed buffer and a fragmenter-assembler module (col.4 lines 1-65, col.6 lines 23-64, col.8 lines 16-63, col.9 line 30-65, col.10 lines 18-65, col.11 lines 29-49 and col.12 lines 35-50).

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cc. **Per claim 39**, *Blair* teaches the multi-link service card of claim 35, wherein the memory logic unit includes a memory device, a data memory control, and a data state logic (col.11 line 12-col.12 line 50).

dd. **Per claim 40**, *Blair* teaches the multi-link service card of claim 34, wherein the sequencer unit includes a reorder module (col.5 lines 1-9, col.9 lines 31-44 and col.10 lines 24-65; provision for reordering fragments).

ee. **Claim 43** is substantially similar to claim 35 and 39-41 and is therefore rejected under the same basis.

ff. **Claim 52** is substantially similar to claims 24 and 6 and is therefore rejected under the same basis.

gg. **Per claim 53**, *Blair* teaches the method of claim 1, wherein the interface card and the multi-link service card comprise removable cards that may be inserted and removed from the network device (col.11 line 12-col.12 line 65).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Rowett et al* (USPN 5,991,817), *Eylon et al* (USPN 6,757,894), *Merchant et al* (USPN 6,760,338), *Walker et al* (USPN 6,278,709), *Ashwood Smith* (USPN 6,839,322), *Bertagna et al* (USPN 6,389,035) and *Mann et al* (USPN 6,212,165).

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds


RUPAL DHARIA
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